Kindly amend the following claims:

sub C1

Q2

1. (amended) A method of roasting a food product comprising the steps of establishing the degree to which the product must be roasted to attain a desired aroma; generating a measurable first parameter which is indicative that the product has been sufficiently roasted to yield the desired aroma; storing the first parameter; roasting fresh product at a roasting temperature by flowing heated air over the fresh product; filtering substantially all pollutants from the heated air following the roasting step; thereafter reheating and recirculating a major portion of the substantially pollutant-free air over the fresh product to thereby continue the roasting step; discharging a minor portion of the filtered air prior to reheating and recirculating the major portion of the air; monitoring a second parameter which is compatible with the first parameter and is generated by the fresh product during roasting; and, upon detecting a match between the first and second parameters, discontinuing the roasting step.

sub D2

Q3

9. (amended) A method according to claim [1] 70 wherein the roasting step comprises flowing heated air over the fresh product, and including the steps of removing substantially all pollutants from the air downstream of the fresh product being heated, cooling the air downstream of the fresh product to substantially room temperature, and thereafter exhausting the cooled air into a room of a building.

10. (amended) A method according to claim [1] 70 wherein the step of roasting includes flowing heated air over the fresh product, and including the steps of filtering substantially all pollutants from the heated air following the roasting step, thereafter reheating and recirculating a major portion of the substantially pollutant-free air over the fresh product to thereby continue the roasting step; and discharging a minor portion of the filtered air prior to reheating and recirculating the major portion of the air.

sub C2

11. (amended) A method of automatically roasting coffee beans to attain a predetermined, desired coffee aroma comprising the steps of roasting a sample of the beans to a degree at which coffee made with the beans exhibits the desired aroma; sensing one of a color and a darkness of the beans when they have reached the degree of roasting and from the sensed color or darkness generating a first parameter which is indicative of the sensed color or

Sub C2

darkness of the bean sample; storing the first parameter; thereafter roasting fresh beans by flowing heated air over the fresh beans; cleaning the heated air after it has passed the fresh beans so that the air is substantially pollutant-free; cooling the air after it has passed the fresh beans to about room temperature; the steps of roasting the fresh beans and heating, cleaning and cooling the air being performed in a substantially closed room frequented by humans; monitoring one of the color and darkness of the fresh beans being roasted and generating a second parameter which is indicative of a color or darkness of the fresh beans; comparing the first and second parameters during roasting of the fresh beans; [and] terminating the roasting of the fresh beans when the first and second parameters match; and discharging the cooled, pollutant-free, room temperature air into the room.

Sub B4

56. (amended) A method for uniformly roasting coffee beans at a plurality of geographically separate locations comprising the steps of placing a roasting machine at each location inside an enclosed room frequented by humans; equipping each roasting machine with a roasting container for holding fresh beans while they are being roasted, a hot air supply for heating the fresh beans to a roasting temperature, and an air removal system for directing used air away from the container; [and] removing [therefrom] from the used air substantially all debris, smoke, oil, and [the like so that air can be discharged into the atmosphere after it has passed the beans in the container without polluting it; observing] other pollutants; after the step of removing, cooling at least a portion of the used air and discharging it into the enclosed room; directing a laser light beam of a frequency in the range of between about 600-800 nm onto the beans in the container during roasting; [with a reflectometer and therewith] generating an output signal from laser light reflected by the beans which [reflects] is a function of the observed darkness of the beans; providing each roasting machine with a computer including a memory; feeding the output signal to the computer; at a central control station determining an optimal darkness for each bean type that will be roasted by the roasting machines; at the control station generating a control signal which reflects the optimal darkness of each roasted bean type; downloading the control signal from the central control station to the computer of each roasting machine; during roasting at any given roasting machine comparing the control signal stored in the associated memory with the output signal generated by the instrument;

when the compared signals match, generating a command signal; and using the command signal to terminate the roasting of the beans in the container.

Please add the following new claims:

62. (new) A method of roasting a food product comprising the steps of establishing the degree to which the product must be roasted to attain a desired aroma; generating a measurable first parameter which is indicative that the product has been sufficiently roasted to yield the desired aroma; storing the first parameter; roasting fresh product at a roasting temperature by flowing heated air over the fresh product; removing substantially all pollutants from the air downstream of the fresh product being heated; cooling the air downstream of the fresh product to substantially room temperature and thereafter exhausting the cooled air into a room of a building; monitoring a second parameter which is compatible with the first parameter and is generated by the fresh product during roasting; and, upon detecting a match between the first and second parameters, discontinuing the roasting step.

63. (new) A method according to claim 62 wherein the first parameter is one of the color and darkness of the product and the second parameter is one of the color and darkness of the fresh product during the roasting step.

64. (new) A method according to claim 64 including adjusting the step of discontinuing the roasting of the fresh product as a function of at least one of the roasting temperature and atmospheric pressure.

65. (new) A method according to claim 62 wherein the step of monitoring comprises making a spectral analysis of the fresh product during the roasting step.

66. (new) A method according to claim 65 wherein the step of making a spectral analysis comprises directing a laser beam onto the fresh product during the roasting step.

67. (new) A method according to claim 66 wherein the laser beam has a wavelength in the range of between about 600 to 800 nm.

Sub D6>

68. (new) A method according to claim 62 including the steps of providing a multiplicity of different product types, establishing and storing the first parameter for each product type, prior to the roasting step selecting one of the multiplicity of product types for roasting; and wherein the step of discontinuing is carried out when a match between the first parameter for the selected product type and the second parameter match.

69. (new) A method according to claim 68 including the step of establishing a plurality of first parameters for at least one of the multiplicity of product types, each of which defines a different degree to which the product must be roasted to attain correspondingly differing desired aromas; prior to the roasting step selecting one of the plurality of first parameters for the at least one product type; and wherein the step of discontinuing is performed when the second parameter matches the selected one of the first parameters.

70. (new) A method of roasting a food product comprising the steps of establishing the degree to which the product must be roasted to attain a desired aroma; generating a measurable first parameter which is indicative that the product has been sufficiently roasted to yield the desired aroma; storing the first parameter; roasting fresh product at a roasting temperature; monitoring a second parameter which is compatible with the first parameter and is generated by the fresh product during roasting; upon detecting a match between the first and second parameters, discontinuing the roasting step and adjusting the step of discontinuing the roasting of the fresh product as a function of at least one of the roasting temperature and atmospheric pressure.

Sub D7>

71. (new) A method of roasting a food product comprising the steps of establishing the degree to which the product must be roasted to attain a desired aroma by determining a first parameter which comprises at least one of a color and a degree of darkness which the product must have to yield the desired aroma; generating at least one second parameter which reflects a predetermined development of the first parameter during a roasting of the product; storing the parameters; roasting fresh product at a roasting temperature; monitoring the first parameter during roasting and discontinuing the roasting step when the product reaches the first parameter; monitoring the at least one second parameter during roasting; and adjusting the roasting step when the second parameter indicates that a deviation

from the predetermined development of the first parameter occurred to thereby reestablish the predetermined development of the second parameter.

72. (new) A method according to claim 71 wherein the second parameter comprises at least one of the roasting temperature and atmospheric pressure.

73. (new) A method according to claim 71 wherein the step of monitoring the first parameter comprises directing a laser beam onto the fresh product during the roasting step.

74. (new) A method according to claim 73 wherein the laser beam has a wavelength in the range of between about 600 to 800 nm.

75. (new) A method according to claim 71 including the steps of providing a multiplicity of different product types, establishing and storing the first parameter for each product type, prior to the roasting step selecting one of the multiplicity of product types for roasting; and wherein the step of discontinuing is carried out when the product reaches the first parameter for the selected product type.

76. (new) A method according to claim 75 including the step of establishing a plurality of first parameters for at least one of the multiplicity of product types, each of which defines a different degree to which the product must be roasted to attain correspondingly differing desired aromas; prior to the roasting step selecting one of the plurality of first parameters for the at least one product type; and wherein the step of discontinuing is performed when the product reaches the selected one of the first parameters.

77. (new) A method according to claim 71 wherein the roasting step comprises flowing heated air over the fresh product, and including the steps of removing substantially all pollutants from the air downstream of the fresh product being heated, cooling the air downstream of the fresh product to substantially room temperature, and thereafter exhausting the cooled air into an enclosed room of a building.

78. (new) A method according to claim 71 wherein the step of roasting includes flowing heated air over the fresh product, and including the steps of filtering substantially all pollutants from the heated air following the roasting step, thereafter reheating

Sub D9>

and recirculating a major portion of the substantially pollutant-free air over the fresh product to thereby continue the roasting step; and discharging a minor portion of the filtered air prior to reheating and recirculating the major portion of the air.

Sub C6>

79. (new) A method of roasting coffee beans in a roasting container having a viewing window comprising the steps of establishing the degree to which the coffee beans must be roasted to attain a desired aroma by preestablishing a first parameter which is a function of light reflected by the beans during roasting; roasting the beans at a roasting temperature; positioning a spectrometer at a location spaced from the window and the beans being roasted, the spectrometer comprising a laser emitting light and being adapted to analyze light sensed by the spectrometer; activating the laser to thereby direct laser light onto the beans being roasted; with the spectrometer sensing light from the laser reflected by the beans being roasted; comparing the sensed, reflected light with the first parameter; and terminating the roasting step when the sensed light reflected by the beans being noted reaches the first parameter.

REMARKS:

Claims 1-11, 56-58 and 62-79 are pending.

Attached for the convenience of the Examiner is a clean "Claims Appendix" of the current wording of all pending claims.

Applicants have added specific reference to their provisional application on page 1 of the specification as required in the Office Action.

This application now contains seven independent claims which relate to the originally filed, elected claims 1-13 and 56-58 as follows:

Claim 1 is a combination of original claims 1 and 10.

Claim 11 is a combination of original claims 11-13.

Claim 56 is original claim 56 in amended form.

Claim 62 is a combination of original claims 1 and 9.

Claim 70 is a combination of original claims 1 and 3.

Claims 71 and 79 are new independent claims.

All claims of elected claim group I (claims 1-13 and 56-58) were primarily rejected over Porzi (4,849,625).

Porzi discloses to monitor the progress of a coffee roast by arranging multiple photo-emitters (1) about a centrally located fiber bundle end (19), mounting them in a common, cooled housing, and affixing the housing onto a flange surrounding an inspection glass (4) on a hatch (5) of a coffee roaster. Beans being roasted contact the opposite side of the inspection glass. Light (that is, any light!) generated by the emitters is directed through the inspection glass onto the beans on the other side thereof. Some of the light from the emitters reflected by the beans is captured by the fiber bundle end and relayed to a photo-detector (2). The captured, reflected light is compared with a control setting from a colorimeter (7) of a processing unit (6), and when the two match the roasting oven is shut off. (Column 4, lines 3-29.)

Porzi contains no further relevant disclosure concerning the roasting of the beans. Porzi is concerned with solving the prior difficulty of accurately monitoring the color of the beans during roasting. The high temperature in the vicinity of the roasting drum and the sensitivity of the photo-detector and, to a lesser extent, of the photo-emitters as well, to ambient temperature changes adversely affects the readout of the detectors, which can lead to wrong roasting termination signals. In other words, Porzi seeks to eliminate "thermally-induced" measurement errors (column 2, line 32).

Additionally, Porzi is concerned with disturbances and measurement inaccuracies resulting from ambient light. This is eliminated by totally enclosing the photo-emitters as well as the photo-detector. (Column 4, lines 11-16.)

Porzi seeks to eliminate thermally induced measurement errors by placing the photo-detector remotely from the inspection glass inside a processing unit (6) while abutting the photo-emitters against the inspection glass (4) and, to prevent signal drift due to a heating of the photo-emitters, mounting them in a cooled housing. Thus, Porzi's disclosure is limited to packaging the photo-emitters, the photo-detector and the fiberoptic cable connecting the latter with the inspection window.

Porzi is not concerned with the details of the roasting process and provides no disclosure relevant thereto.

Original claims 1 and 3 (the latter depending from the former) were rejected for anticipation by Porzi. New claim 70, which is a combination of original claims 1 and 3, specifically recites the step of "adjusting the step of discontinuing the roasting of the fresh product as a function of at least one of the roasting temperature and atmospheric pressure". (The quoted portion of claim 63 is the substantive part of original claim 3.)

There is not a single word in Porzi relating to any effect of the roasting temperature or atmospheric pressure on roasting and/or its termination. The sole disclosure in Porzi concerning the actual roasting of the beans is that the comparator (20) emits a signal which shuts off the oven when the output of the colorimeter matches the output of the photo-detector.

Accordingly, new claim 63 (as well as original claim 3) is not anticipated by Porzi.

Original claims 9, 10, 12 and 13 were rejected for obviousness over Porzi in view of Tidland (5,958,494) because Tidland was viewed as disclosing the removal of pollutants from the exhaust, recycling the filtered air, and "*discharging the remainder of the filtered air to the surrounding room*" (Office Action, page 7).

Original claim 9 has been combined with original claim 1 into new independent claim 62, which now recites in relevant parts that the product is being roasted by flowing heated air over it, removing substantially all pollutants from the air after it has heated the beans, "cooling the air downstream of the fresh product to substantially room temperature, and thereafter exhausting the cooled air into a room of a building".

The Office Action acknowledged that Porzi does not disclose cleaning the air or discharging it into a surrounding room. However, Tidland was viewed as providing the disclosure missing from Porzi. This is not the case.

Tidland discloses an indoor coffee roasting machine which seeks to filter and clean the air used to heat the beans, however, the "reheated air is then recirculated back into

the roasting chamber" (column 2, lines 27-28.) This "[c]ontinuously filtering the recirculated air allows the roasting system to be placed in a room without requiring outside ventilation and without producing objectionable odors" (column 2, lines 39-42). *However, during roasting no air is cooled and no cooled, cleaned air is discharged to the surrounding room.*

As is best illustrated in Fig. 4 of Tidland, hot, polluted air from the roasting drum flows into a cyclone (60) for the removal of particulates and from there via a pipe (61) along dashed line (5) past open dampers (20), through filters (72, 74, 76, 78), past heating elements (54), and via fan (30) and duct (32) (see Fig. 1) back to the roasting chamber (36).

Tidland notes that the heating elements (54) heat the air to a sufficient temperature to begin roasting the green coffee beans (column 5, lines 30-31) and notes that "as the hot air expands, some of the excess air in the roasting system 12 escapes through the filters 17 and 18 to the outside environment" (column 5, lines 42-46). In the context of the disclosure in column 5, lines 19-53 and the drawings, particular Fig. 4, it is clear that the expanding "excess air in the roasting system 12" (column 5, line 44) refers to air in the system during the startup phase. During the actual roasting process, dampers (20) are open and contaminated, still-hot air (though not sufficiently hot for roasting) flows through filters (72-78) and past heater (54) back into the roasting chamber. If the air coming from the roasting chamber and cyclone (60) were permitted to exit past filters (17, 18), the exiting air would be both hot and unfiltered, i.e. heavily polluted. Filters (17) and (18) are only casually mentioned as being a coarse and an electronic filter, respectively, without further describing their characteristics or functionality. In contrast, the characteristics and requirements of filters (72-78), which are downstream of dampers (20) and the filters (17, 18), are discussed in some detail in column 4, lines 28-40, and they include, in addition to a coarse fiberglass filter similar to filter (17), a high efficiency electronic filter for removing micron-sized pollution particulates and a carbon filter to remove odors from the exhaust. These filters clean the used air from the roasting chamber and remove odors.

If just a portion of the recirculating, used air were permitted to escape to the exterior of the roaster past filters (17, 18), the air would be hot (typically in the vicinity of

several hundred degrees F) and full of pollutants. If such a machine were to operate in a closed room frequented by humans, the humans would suffocate in short order.

Thus, Tidland teaches exactly what it says, namely to recirculate the filtered and reheated air back into the roasting chamber (column 2, lines 27-28), and no part of the air, except expanding air during startup, and possibly some air after conclusion of the roasting, is permitted to escape.

Tidland therefore does not disclose or in any form suggest to remove substantially all pollutants from the used air, thereafter cooling the used air downstream to substantially room temperature, and then exhausting the cooled air into a room of a building as is recited in claim 62.

Porzi and Tidland, taken in combination or separately, therefore do not suggest these limitations, and original claim 9 and new claim 62 are not obvious over them.

Original claim 10 (which initially depended from original claim 1 but now depends from claim 70) was also rejected over Porzi in view of Tidland for the same reasons discussed above. Original claim 10 recites that a major portion of the used air, after the removal of substantially all pollutants, is reheated and recirculated to the roasting chamber to thereby continue the roasting step, but additionally requires "discharging a minor portion of the filtered air prior to reheating and recirculating the major portion of the air".

There is no suggestion in Tidland to recirculate the major portion of the used air after cleaning and heating it, and discharging a minor portion of the air prior to reheating. As was discussed above in connection with claim 9, Tidland discloses to recirculate all air; the only exception is expanding air during the startup phase and some air following the termination of roasting. Thus, original claim 10, and therewith amended claim 1 (which has been amended to incorporate the substantive portion of claim 10), is not obvious over Porzi and Tidland for the same reasons for which claim 9 (and new independent claim 62) is not obvious.

In addition, by discharging a minor portion of the filtered air on an ongoing basis, the buildup of moisture inside the roasting chamber in such a modified closed loop system is prevented. Absent such a venting, there would be a moisture buildup inside the

roaster because green coffee beans contain water, which can lead to a unmanageable moisture buildup inside the roasting system, as is mentioned on page 26, lines 23-27 of the present application. Tidland contains no suggestion how to solve the moisture buildup problem other than observing that it might require more heat input to the system (column 6, lines 17-22), a technical oversight in Porzi that more likely than not renders the roaster of Tidland inoperative because it will result in the rapid clogging of at least the moisture-sensitive carbon filter (78).

Thus, neither Porzi nor Tidland, taken in combination or separately, suggests the above-quoted limitation of amended claim 1. Claim 1, and claim 9 (now depending from claim 71), are therefore not obvious over Porzi in view of Tidland.

Independent claim 11 is a combination of original claims 11-13 and, in a manner similar to claims 9 and 62 discussed above, recites cleaning the used air, "cooling the air after it has passed the fresh beans to about room temperature; the steps of roasting the fresh beans and heating, cleaning and cooling the air being performed in a substantially closed room frequented by humans; ... and discharging the cooled, pollutant-free room temperature air into the room".

For the reasons discussed above in connection with claims 9 and 62, amended claim 11 is not obvious over Porzi and Tidland.

Independent claim 56 has been amended and in part recites that the roasting machines at the plurality of locations are disposed "inside a closed room frequented by humans ... removing from the used air substantially all debris, smoke, oil, and other pollutants; [and] after the step of removing, cooling at least a portion of the used air and discharging it into the enclosed room ...."

For the reasons discussed above in connection with claims 9, 62 and 11, Porzi, alone or in combination, does not suggest the above-quoted limitations of claim 56.

Additionally, claim 56 is limited to "directing a laser light beam of a frequency in the range of between about 600-800 nm onto the beans in the container during roasting; [and] generating an output signal from laser light reflected by the beans which is a function of the observed darkness of the beans ...." Applicants note that in connection with the rejection

of claims 5-6, the use of a wave length of 600-800 nm was considered obvious because this falls within the visible light used by Porzi. Applicants disagree.

As discussed above, amongst others, Porzi seeks to eliminate inaccurate readings caused by ambient light by completely enclosing the light emitters and photo-sensors. Since lasers have a fixed frequency (or wave length) which can be tuned to the degree of darkness (or optionally the color) of the beans when they have been fully roasted, ambient light plays little if any role in the resulting measurement. Thus, once a desired degree of darkness or color has been determined, a laser can be selected, or the laser can be tuned, so that ambient light is no longer an appreciable problem. Accordingly, there is no need for the complicated structure of Porzi to eliminate the effects of ambient light. The use of laser light per se, and even more so within a specified range, therefore, is not obvious from Porzi. If it were, Porzi would have disclosed to use laser light, thereby overcoming the difficulties created for him by ambient light and further eliminating the need for Porzi's complicated arrangement altogether.

For this additional reason, claim 56, and therewith claims 57 and 58 depending from it, is not obvious. This also applies to Sher (5,062,066), cited against claim 56, because Sher has no disclosure whatsoever concerning the use of lasers in general and lasers of a specific wave length range in particular.

Accordingly, claims 56-58 are not obvious over Porzi in view of Tidland and Sher.

New independent claim 71 is directed to a roasting method in which a first roasting parameter is established and roasting is terminated when the product in question reaches that parameter. In addition, claim 64 requires "generating at least one second parameter which reflects a predetermined development of the first parameter during roasting of the product; ... monitoring the at least one second parameter during roasting; and adjusting the roasting step when the second parameter indicates that a deviation from the predetermined development of the first parameter occurred to thereby reestablish the predetermined development of the first parameter". The importance of monitoring the development of the first parameter, e.g. the darkness or color of the coffee beans, is set forth in some detail on page 8, lines 4-18 of this application, as follows:

> "In addition, the progress of the roasting operation, and in particular the change in darkness or development of the beans during roasting, is monitored in real time and compared to the darkness change encountered during the sample roast. If, during a subsequent on-site production roast, the darkness (or color) development of the bean deviates from that recorded during the sample roast, other roasting parameters, such as the hot roasting air temperature and/or the roasting air flow rate, are adjusted until the change in darkness corresponds to that established by the sample roast. This assures that the coffee bean finish obtained during the sample roast and judged to be optimal for the bean is precisely replicated during each production roast on each of the individual roasting machines that form part of the overall system."

Neither Porzi nor any of the other cited references anywhere suggest to monitor any parameter other than the one which terminates the roast, e.g. color or darkness. In the absence of any corresponding disclosure or suggestion in the prior art, new claim 64 is neither anticipated by nor obvious in view of any of the references, taken singly or in combination.

Claims 72-78 depend from claim 64 and derive their patentability from it as well as from the individual recitations in the dependent claims, many of which are discussed above, and each of which makes the claims independently allowable because the prior art neither discloses nor suggests the subject matter recited by them. Accordingly, claims 72-78 are also neither anticipated by nor obvious in view of any of the cited references.

Finally, new independent claim 79 is limited to a coffee roasting method which employs a spectrometer that directs a laser beam onto the beans being roasted. The claim recites that the spectrometer is positioned "at a location spaced from the window [of the roasting container] and the beans being roasted ... the spectrometer sensing light from the laser reflected by the beans being roasted; comparing the sensed, reflected light with the first

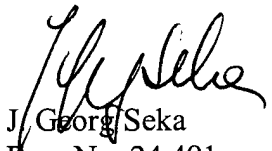
parameter; and terminating the roasting step when the sensed light reflected by the beans being roasted reaches the first parameter".

Support for these limitations is found on page 17, lines 24-29, page 19, lines 11-24, and Fig. 5B, the latter clearly illustrating the spacing between window 98 and spectrometer 108 that directs the laser beam 109 into the interior of the roasting drum. By using laser light of the desired wave length, measurement inaccuracies from ambient light are eliminated. Thus, there is no need for the complicated mounting arrangement of Porzi to abut the light source and light detecting (fiberoptics) against the viewing window as in Porzi. Instead, the spectrometer can be conveniently mounted some distance away from the viewing window, an arrangement which Porzi specifically seeks to avoid. Accordingly, new claim 79 is neither disclosed or suggested by Porzi or, for that matter, by any of the other references of record.

In view of the foregoing, applicants submit that all pending claims 1-11, 56-58 and 62-79 are allowable, and the issuance of a formal notice to that effect at an early date is requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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CLAIMS APPENDIX

1. (amended) A method of roasting a food product comprising the steps of establishing the degree to which the product must be roasted to attain a desired aroma; generating a measurable first parameter which is indicative that the product has been sufficiently roasted to yield the desired aroma; storing the first parameter; roasting fresh product at a roasting temperature by flowing heated air over the fresh product; filtering substantially all pollutants from the heated air following the roasting step; thereafter reheating and recirculating a major portion of the substantially pollutant-free air over the fresh product to thereby continue the roasting step; discharging a minor portion of the filtered air prior to reheating and recirculating the major portion of the air; monitoring a second parameter which is compatible with the first parameter and is generated by the fresh product during roasting; and, upon detecting a match between the first and second parameters, discontinuing the roasting step.

2. A method according to claim 1 wherein the first parameter is one of the color and darkness of the product and the second parameter is one of the color and darkness of the fresh product during the roasting step.

3. A method according to claim 2 including adjusting the step of discontinuing the roasting of the fresh product as a function of at least one of the roasting temperature and atmospheric pressure.

4. A method according to claim 1 wherein the step of monitoring comprises making a spectral analysis of the fresh product during the roasting step.

5. A method according to claim 4 wherein the step of making a spectral analysis comprises directing a laser beam onto the fresh product during the roasting step.

6. A method according to claim 5 wherein the laser beam has a wavelength in the range of between about 600 to 800 nm.

7. A method according to claim 1 including the steps of providing a multiplicity of different product types, establishing and storing the first parameter for each product type, prior to the roasting step selecting one of the multiplicity of product types for

roasting; and wherein the step of discontinuing is carried out when a match between the first parameter for the selected product type and the second parameter match.

8. A method according to claim 7 including the step of establishing a plurality of first parameters for at least one of the multiplicity of product types, each of which defines a different degree to which the product must be roasted to attain correspondingly differing desired aromas; prior to the roasting step selecting one of the plurality of first parameters for the at least one product type; and wherein the step of discontinuing is performed when the second parameter matches the selected one of the first parameters.

9. (amended) A method according to claim 70 wherein the roasting step comprises flowing heated air over the fresh product, and including the steps of removing substantially all pollutants from the air downstream of the fresh product being heated, cooling the air downstream of the fresh product to substantially room temperature, and thereafter exhausting the cooled air into a room of a building.

10. (amended) A method according to claim 70 wherein the step of roasting includes flowing heated air over the fresh product, and including the steps of filtering substantially all pollutants from the heated air following the roasting step, thereafter reheating and recirculating a major portion of the substantially pollutant-free air over the fresh product to thereby continue the roasting step; and discharging a minor portion of the filtered air prior to reheating and recirculating the major portion of the air.

11. (amended) A method of automatically roasting coffee beans to attain a predetermined, desired coffee aroma comprising the steps of roasting a sample of the beans to a degree at which coffee made with the beans exhibits the desired aroma; sensing one of a color and a darkness of the beans when they have reached the degree of roasting and from the sensed color or darkness generating a first parameter which is indicative of the sensed color or darkness of the bean sample; storing the first parameter; thereafter roasting fresh beans by flowing heated air over the fresh beans; cleaning the heated air after it has passed the fresh beans so that the air is substantially pollutant-free; cooling the air after it has passed the fresh beans to about room temperature; the steps of roasting the fresh beans and heating, cleaning and cooling the air being performed in a substantially closed room frequented by humans;

monitoring one of the color and darkness of the fresh beans being roasted and generating a second parameter which is indicative of a color or darkness of the fresh beans; comparing the first and second parameters during roasting of the fresh beans; terminating the roasting of the fresh beans when the first and second parameters match; and discharging the cooled, pollutant-free, room temperature air into the room.

56. (amended) A method for uniformly roasting coffee beans at a plurality of geographically separate locations comprising the steps of placing a roasting machine at each location inside an enclosed room frequented by humans; equipping each roasting machine with a roasting container for holding fresh beans while they are being roasted, a hot air supply for heating the fresh beans to a roasting temperature, and an air removal system for directing used air away from the container; removing from the used air substantially all debris, smoke, oil, and other pollutants; after the step of removing, cooling at least a portion of the used air and discharging it into the enclosed room; directing a laser light beam of a frequency in the range of between about 600-800 nm onto the beans in the container during roasting; generating an output signal from laser light reflected by the beans which is a function of the observed darkness of the beans; providing each roasting machine with a computer including a memory; feeding the output signal to the computer; at a central control station determining an optimal darkness for each bean type that will be roasted by the roasting machines; at the control station generating a control signal which reflects the optimal darkness of each roasted bean type; downloading the control signal from the central control station to the computer of each roasting machine; during roasting at any given roasting machine comparing the control signal stored in the associated memory with the output signal generated by the instrument; when the compared signals match, generating a command signal; and using the command signal to terminate the roasting of the beans in the container.

57. The method according to claim 56 including the steps of keeping an inventory of fresh beans proximate each roasting machine; monitoring the size of the fresh bean inventory; generating a low-inventory signal when the fresh bean inventory drops below a predetermined level; transmitting the inventory control signal to the central control station; and transferring additional fresh beans to the roasting machine which generated the low-inventory signal upon receipt thereof at the control station.

58. A method according to claim 56 wherein each roasting machine has a plurality of different fresh bean types which can be roasted; and including the steps of generating an optimal darkness signal for each bean type at the control station; downloading each darkness signal to the computers of the roasting machines of the system; and, during roasting at any given one of the roasting machines, comparing the output signal from the instrument with the stored darkness signal which corresponds to the bean type being roasted in the container.

62. (new) A method of roasting a food product comprising the steps of establishing the degree to which the product must be roasted to attain a desired aroma; generating a measurable first parameter which is indicative that the product has been sufficiently roasted to yield the desired aroma; storing the first parameter; roasting fresh product at a roasting temperature by flowing heated air over the fresh product; removing substantially all pollutants from the air downstream of the fresh product being heated; cooling the air downstream of the fresh product to substantially room temperature and thereafter exhausting the cooled air into a room of a building; monitoring a second parameter which is compatible with the first parameter and is generated by the fresh product during roasting; and, upon detecting a match between the first and second parameters, discontinuing the roasting step.

63. (new) A method according to claim 62 wherein the first parameter is one of the color and darkness of the product and the second parameter is one of the color and darkness of the fresh product during the roasting step.

64. (new) A method according to claim 64 including adjusting the step of discontinuing the roasting of the fresh product as a function of at least one of the roasting temperature and atmospheric pressure.

65. (new) A method according to claim 62 wherein the step of monitoring comprises making a spectral analysis of the fresh product during the roasting step.

66. (new) A method according to claim 65 wherein the step of making a spectral analysis comprises directing a laser beam onto the fresh product during the roasting step.

67. (new) A method according to claim 66 wherein the laser beam has a wavelength in the range of between about 600 to 800 nm.

68. (new) A method according to claim 62 including the steps of providing a multiplicity of different product types, establishing and storing the first parameter for each product type, prior to the roasting step selecting one of the multiplicity of product types for roasting; and wherein the step of discontinuing is carried out when a match between the first parameter for the selected product type and the second parameter match.

69. (new) A method according to claim 68 including the step of establishing a plurality of first parameters for at least one of the multiplicity of product types, each of which defines a different degree to which the product must be roasted to attain correspondingly differing desired aromas; prior to the roasting step selecting one of the plurality of first parameters for the at least one product type; and wherein the step of discontinuing is performed when the second parameter matches the selected one of the first parameters.

70. (new) A method of roasting a food product comprising the steps of establishing the degree to which the product must be roasted to attain a desired aroma; generating a measurable first parameter which is indicative that the product has been sufficiently roasted to yield the desired aroma; storing the first parameter; roasting fresh product at a roasting temperature; monitoring a second parameter which is compatible with the first parameter and is generated by the fresh product during roasting; upon detecting a match between the first and second parameters, discontinuing the roasting step and adjusting the step of discontinuing the roasting of the fresh product as a function of at least one of the roasting temperature and atmospheric pressure.

71. (new) A method of roasting a food product comprising the steps of establishing the degree to which the product must be roasted to attain a desired aroma by determining a first parameter which comprises at least one of a color and a degree of darkness which the product must have to yield the desired aroma; generating at least one second parameter which reflects a predetermined development of the first parameter during a roasting of the product; storing the parameters; roasting fresh product at a roasting temperature; monitoring the first parameter during roasting and discontinuing the roasting step when the

product reaches the first parameter; monitoring the at least one second parameter during roasting; and adjusting the roasting step when the second parameter indicates that a deviation from the predetermined development of the first parameter occurred to thereby reestablish the predetermined development of the second parameter.

72. (new) A method according to claim 71 wherein the second parameter comprises at least one of the roasting temperature and atmospheric pressure.

73. (new) A method according to claim 71 wherein the step of monitoring the first parameter comprises directing a laser beam onto the fresh product during the roasting step.

74. (new) A method according to claim 73 wherein the laser beam has a wavelength in the range of between about 600 to 800 nm.

75. (new) A method according to claim 71 including the steps of providing a multiplicity of different product types, establishing and storing the first parameter for each product type, prior to the roasting step selecting one of the multiplicity of product types for roasting; and wherein the step of discontinuing is carried out when the product reaches the first parameter for the selected product type.

76. (new) A method according to claim 75 including the step of establishing a plurality of first parameters for at least one of the multiplicity of product types, each of which defines a different degree to which the product must be roasted to attain correspondingly differing desired aromas; prior to the roasting step selecting one of the plurality of first parameters for the at least one product type; and wherein the step of discontinuing is performed when the product reaches the selected one of the first parameters.

77. (new) A method according to claim 71 wherein the roasting step comprises flowing heated air over the fresh product, and including the steps of removing substantially all pollutants from the air downstream of the fresh product being heated, cooling the air downstream of the fresh product to substantially room temperature, and thereafter exhausting the cooled air into an enclosed room of a building.

78. (new) A method according to claim 71 wherein the step of roasting includes flowing heated air over the fresh product, and including the steps of filtering substantially all pollutants from the heated air following the roasting step, thereafter reheating and recirculating a major portion of the substantially pollutant-free air over the fresh product to thereby continue the roasting step; and discharging a minor portion of the filtered air prior to reheating and recirculating the major portion of the air.

79. (new) A method of roasting coffee beans in a roasting container having a viewing window comprising the steps of establishing the degree to which the coffee beans must be roasted to attain a desired aroma by preestablishing a first parameter which is a function of light reflected by the beans during roasting; roasting the beans at a roasting temperature; positioning a spectrometer at a location spaced from the window and the beans being roasted, the spectrometer comprising a laser emitting light and being adapted to analyze light sensed by the spectrometer; activating the laser to thereby direct laser light onto the beans being roasted; with the spectrometer sensing light from the laser reflected by the beans being roasted; comparing the sensed, reflected light with the first parameter; and terminating the roasting step when the sensed light reflected by the beans being roasted reaches the first parameter.